

## **Chapter Four**

# **PROPOSED IMPROVEMENTS AND RATIONALE**

### **INTRODUCTION**

This Chapter provides recommendations for corridor improvements within the study area. It begins by summarizing the proposed major improvements and then detailed improvements for each stretch of highway. Recommendations range from adding lanes, improving intersections, adding boulevards, converting diagonal intersections to T-intersections, closing or consolidating driveways, and other access management solutions. The final section in this chapter includes pedestrian, trail and transit observations.

### **RECOMMENDED IMPROVEMENTS**

The US-2/US-141/M-95 Corridor Advisory Committee assisted the Planning and Zoning Center, Inc. with the identification of specific traffic flow and safety improvements along the corridor. The following list of recommended improvements is presented in three different sections. The first section is the stretch of US-2 starting at the Wisconsin/Michigan state line heading east from the western border of Dickinson County (recommendations 1-122). The second section is the stretch of M-95 starting at the Wisconsin/Michigan state line north through Kingsford to US-2/US-141 (recommendations A-T) and the last section is the stretch of US-141 starting at the Wisconsin/Michigan state line heading north to US-2 (recommendations a-c).

The recommendations are listed per highway section. Each issue or recommendation is numbered or lettered as outlined above and is visually represented on the attached Maps 4-1 to 4-6. The numbering is not a representation of importance of one issue over another issue; it is merely a means to organize the issues and recommendations. The list represents a collection of issues, ranging from pedestrian oriented concerns, driveway closures, and intersection improvements.

In addition to these recommendations, future consideration should be given to the following road connections within Iron Mountain that lie outside of the 1,000' corridor study area; extend Terminal Avenue east to Hydraulic Falls Road and also extend west to connect with Woodward Avenue at the M-95 intersection; extend Knight St. west to connect with East Boulevard at the Nelson Drive intersection and create a new road from the intersection of South Park Avenue and South Jackson Street heading east to intersect with Hydraulic Falls Road and East Breitung Avenue; and construct a road from the newly extended Terminal Avenue and Hydraulic Falls intersection south and "T" into Breitung Avenue. These new roads are represented as dashed lines on Map 4-2, as well as a few others. The locations are generalized and exact locations would depend upon topographic limitations, property ownership, funding and opportunity. The key is that an interconnected road system, and especially new roads paralleling US-2 will do the most in the future to retain the movement functions of US-2 and the public investment that exists in that road.

Future driveways should be planned to share access from a limited number of access points. All new driveways should be spaced in accordance with the MDOT Guidelines for Driveway Spacing as shown in Table 4-1 below. These standards will be included in the model access management ordinance in Appendix B.

Table 4-1  
**Guideline for Unsignalized Driveway Spacing**

<b>Speed on Roadway (MPH)</b>	<b>MDOT Spacing Guidelines (feet)</b>
25	130
30	185
35	245
40	300
45	350
50	455
55	455+

*Source: "Spacing for Commercial Drives and Streets," MDOT Traffic & Safety Division Note 7.9, Table 1.*

**US-2 from the West Dickinson County line (Wisconsin/Michigan border) east to Dickinson/Menominee County line**

There are 122 identified specific sites, or areas with recommendations within this stretch of highway. Some recommendations address safety issues, including reducing the number of access points to US-2/US-141/M-95, better defining entrances and exits from businesses to eliminate confusion, constructing rear service roads and frontage roads, and eliminating oblique angles at several intersections. See Maps 4-1 and 4-6 for the location of each of the following recommendations.

**Map 4-1**

- 1) Create shared private driveway or relocate existing driveway on east for two driveways too close together, to create recommended 455' of separation distance.
- 2) Sign U-shaped drive for use by maintenance and police vehicles (from Wisconsin) so it is not confused as a driveway or other access.
- 3) Preserve visibility at Pine Mountain Road and US-2 intersection. Do not plant trees or place other obstructions in this intersection.
- 4) Consider constructing a channelizing island at Bass Lake Road Intersection and US-2 to give some protection to vehicles turning left onto US-2 as visibility is somewhat limited due to the curve, or square up intersection to reduce turning radius. Another alternative is to close Bass Lake Road and re-route so it is directly across from Pine Mountain Road.
- 5) Either extend two west-bound traffic lanes from western edge of current boulevard section, west of US-2/M-95, to west of Pine Mountain Road, or choke to 2 lanes at the west median crossover (several hundred feet to the east). In order to extend two westbound lanes to west of Pine Mountain Road, the bridge over the railroad and Bass Lake Road will need to be widened. Any major work on a bridge over a railroad requires that the bridge meet the minimum railroad under-clearance as a part of the project. The bridge would need to be raised

about two feet to meet minimum under-clearance criteria. This will impact grades for driveways and Bass Lake Road. Another option would be to lower the tracks a couple feet.

- 6) The intersection of US-2 and M-95 here (north junction) and at #65 (Map 4-3) the south junction on the east side of Iron Mountain could both benefit from redesign to improve safety of turning movements, to reduce traffic delays and reduce confusion at night. Several options should be considered. However, no decision on an option should be made without first putting into the context of a possible new US-141 route into Michigan. This will require careful coordination with the Wisconsin DOT. Should the route location change to US-8 in Norway, or to the Spread Eagle Plains or Florence in Wisconsin, then the traffic volume at the north and south junction would be greatly affected and different design options may emerge. Since the route of US-141 through Niagara is so twisting, slow and easily congested, an alternate route should be considered. If no US-141 route location change were expected for more than ten years, then improvements to the north and south junction should be considered much sooner. Each option should be considered in tandem for each junction at the same time, and some preference should be given to a uniform design option that could be implemented at both intersections to reduce driver confusion. Options to consider for the north junction include the following:
  1. Construction of a standard five-lane roadway with a standard signalized intersection;
  2. Consider redesigning the intersection as a roundabout and eliminate the traffic signal; and
  3. Consider creation of a proper indirect U-turn with fewer median cross-overs and a traffic signal in each direction.
- 7) Reduce from three to two driveways or use T frontage road with a single driveway.
- 8) Close little used driveway access to US-2. Use existing driveway access on Timber Line Road.
- 9) Consolidate two driveways into one. Either provide one new driveway to be centrally located or provide two widely separated driveways; both options should have driveways located directly across from the property on the west side of US-2, (if not closed, see #8 above).
- 10) Consolidate two driveways into one; unless semi-truck use requires two driveways, then move the southern driveway farther south and mark each for one-way use only. Use existing driveway aligned with Moon Lake Drive for ingress and egress.
- 11) Consolidate four driveways into two. (Riverside Auto).
- 12) Consolidate two driveways into one (between the two existing ones).
- 13) Construct a shared driveway for two to three homes or create a short residential frontage road at the edge of the right-of-way to Sunset Drive serving seven to eight properties.

- 14) Locate driveway for lot north of Sunset Drive on Sunset Drive west of US-2 for ingress and egress instead of on US-2.
- 15) Consolidate two driveways into one.
- 16) Carefully plan for a single access into the new community college site.
- 17) In future development of this property, restrict adding new driveways. Either use shared driveway with abutting property to the north, or gain access from Frank Pipp Drive on south.
- 18) Consider changing from four to five lanes from Frank Pipp Drive west to M-95 or construct as a boulevard section.
- 19) Close northern most driveway and consolidate two driveways into one; or close both driveways and use the existing driveway located 200' south of Frank Pipp Drive for ingress and egress.
- 20) Consider closing two driveways and have five properties share two accesses and a frontage road to US-2. Remaining driveways should be aligned with existing driveways on the east side of US-2.
- 21) Consolidate two driveways into one. Use the existing driveway located off of Pine Street for ingress and egress.

**Map 4-1 & 4-2**

- 22) Install traffic signal at Lake Antoine Road/Railroad Street and US-2 when traffic meets warrants. Also study need for and best options for safe crossing of US-2 at Lake Antoine Road/Railroad Street for pedestrians and bicyclists. At a minimum, consider a ramped overpass or tunnel since the crossing is so wide. If a tunnel is used, integrate use by snowmobiles into the design. If a pedestrian push button signal design is used, be sure pavement markings clearly depict pedestrian crossing area.
- 23) Consider closing long driveway neck and consolidating two driveways into one.
- 24) Consolidate three driveways into two. Use the northern most and southern most driveways for ingress and egress to US-2.
- 25) Consider closing driveway located 150' south of Spring Street. Use Spring Street for ingress and egress.
- 26) Use shared driveways and connected parking lots as the vacant lot develops so there are only two driveways serving the three parcels and the design continues to accommodate semi-trucks at the motel.
- 27) Consolidate two driveways into one. Use the existing driveway located 650' south of Spring Street for ingress and egress to US-2.

- 28) Explore the possibility of constructing a rear service road on old rail line. Rear service road to run parallel to US-2 from at least Railroad Street to Hamilton Road.
- 29) Close driveway, located 100' southwest of North Millie Street. Use shared driveway across from N Millie Street and US-2 intersection.
- 30) When property is developed, align a single new driveway with one of the existing driveways across US-2 and close existing driveway.
- 31) Consolidate two driveways into one. Use the existing driveway located 150' southwest of East Grand Boulevard.
- 32) If possible, align existing driveway with East Stanton Street and US-2 intersection to eliminate offset. If Quarry property is redeveloped carefully manage access as part of redevelopment.
- 33) Define driveway access (install a proper driveway) off of West Main Street at southwest corner of West Main Street and US-2.
- 34) Access too close to Chapin Street, close and relocate if feasible.
- 35) Consolidate to a single access to US-2.
- 36) Close driveway access to US-2. Use 4<sup>th</sup> and 3<sup>rd</sup> Streets for ingress and egress if feasible.

**Map 4-2**

- 37) Consolidate four driveways into two. Use the existing northern-most and southern-most driveways for ingress and egress to US-2.
- 38) Add landscaping along the west side of US-2 from West Fleshiem Street to East Ludington Street to beautify entry to downtown. Be sure the design does not adversely affect the field of vision for the motorist.
- 39) Examine traffic signs related to the signals and street turning movements to ensure there is no driver confusion and/or no unintentional incentive to rush thru to the next signal. (Signs are scheduled for replacement in 2007.) Conduct traffic signal timing study from East Ludington St. to West B Street. Determine if current sequence of traffic lights matches the current standard, and if changing the sequence would decrease traffic congestion between East Ludington Street through West B Street. Also determine feasibility and desirability of reducing speed thru downtown Iron Mountain to make the area more pedestrian friendly. Note: these are generally incompatible objectives and MDOT should work with the city to decide on either the objective with the most credibility or a balanced alternative. Also, as part of improvements underway in the summer of 2005, the signal at Hughitt and US-2 is being removed and a new signal at F Street is being installed. Consideration should be given to removing another downtown signal if warrants are no longer met. According to MDOT, warrants are currently not met for the signal at A Street. If the signal at A Street were removed, pedestrians should be encouraged to use B Street and Ludington Street.

- 40) Improve paint striping at all pedestrian crossings located at traffic signals in the downtown, and consider adding messages warning drivers of pedestrians crossing the streets and encourage pedestrians to use the signalized locations. Currently, striping of crosswalk markings is done every other year. It may need to be annually in downtown Iron Mountain.
- 41) Close Washington Street at US-2 (if it is not accomplished as part of 2005 improvements).
- 42) Connect parking lots and install a shared driveway between Family Video and Damian's located at the northeast corner of Washington Street and US-2 intersection. Improve alley access on this block for rear access.
- 43) Relocate sign and use a consolidated sign panel to advertise all three businesses.

Following the extensive reconstruction of US-2 from Washington to Michigan Avenue in 2005, it may be appropriate to periodically evaluate new traffic movements and consider (regarding points 44-54):

- 44) Either aligning Mid-Town Mall main driveway with East G Street or realigning East G Street to line up with the Mid-Town Mall entrance. If so, redesign parking lot to match new openings on East F Street and East G Street and improve alleys between F, G and H Streets to make it easier to channel traffic to signalized intersections.
- 45) Close continuous opening at northwest corner of East G Street and US-2 intersection. Create driveway off of alley and as mentioned above, improve current alley conditions from East F Street to East H Street.
- 46) Upon redevelopment of McDonald's site, relocate driveways at McDonald's, located on the west corner of H Street and US-2 intersection so the northern-most one is from within the Mid-Town Mall and the western-most access off East H Street are used and existing accesses are closed. In the meantime, convert the driveways located closest to the intersection of H Street and US-2 to right-out only if feasible.
- 47) Consolidate driveways into one. Use the existing driveway at the traffic signal at the intersection of East H Street and US-2 for ingress and egress.
- 48) Square up the access to Jackson by using one existing shared driveway at the South Jackson Street and US-2 intersection for ingress and egress onto US-2.
- 49) Better define not more than two driveways accessing South Jackson Street.
- 50) Interconnect parking lots on northwest corner of Park Avenue and US-2 intersection (paint store, Chinese Restaurant, motel and new pizza shop, plus lots to north when they develop).

- 51) Close exiting driveways at Poms Tire Place that intersect with US-2. Remodel building for rear entrance access off of Park Avenue. Also consolidate five driveways to three, north of Poms to north side of Pasty Shop. Some of this recommendation is included in the 2005 reconstruction project.
- 52) Improve alley behind the Holiday Gas Station between Michigan Avenue and Park Street so more vehicles gain access there from signaled intersections instead of directly from US-2.
- 53) Relocate existing entrance to Taco Bell drive thru to furthest possible location from the intersection of US-2 on the private road leading to Econo Foods and connect parking lot with Best Western using a shared driveway. Consider acquiring the road segment leading to Econo Foods for a public street if Terminal Road is extended east to K-Mart (see below).
- 54) Consolidate two driveways accessing US-2 into one, located on the Best Motel and the restaurant at the northwest corner of Michigan Avenue and US-2. Use existing driveway located 200' from intersection for ingress and egress to both.
- 55) Re-examine the speed limit on US-2 from Park Avenue east to US-141. Determine if reducing speed will promote safety and reduce traffic incidents.
- 56) Extend Terminal Avenue East to K-Mart Road and Hydraulic Falls Road intersection. This would provide a parallel access road to US-2 with access to the mall.
- 57) Extend Oslo Avenue, following the contour behind Best Motel to the Hospital parking lot.
- 58) Realign and extend Hydraulic Falls Road to the west side of the Hospital parking lot and close off existing portion of Hydraulic Falls Road.
- 59) Examine extending a new connecting road perpendicular to the K-Mart parking lot road to US-2, intersecting at the center Hospital drive (which was originally planned when the Mall was created). Then relocate traffic signal from its location a few hundred feet to the east (in front of Wells Fargo Bank) to this new entry location. Do not allow the existing parking lot east of the new connecting road to connect to the new connecting road or there won't be enough stacking space for left turning vehicles. When examining signal spacing relative to the signal at Michigan Avenue, consider moving signal to Park, extending Park over the railroad tracks to the south and connecting Terminal Avenue to the Econo Foods entry to US-2 at Michigan Avenue.
- 60) Install rotary at existing K-Mart parking lot intersection where the road accessing US-2 and K-Mart parking lot intersect. This will help reduce the congestion on the intersecting streets within the Mall area.
- 61) If current use of this site changes, consolidate driveways to two, or put in frontage road.

- 62) If railroad line behind Home Depot is abandoned, consider converting into a rear service road parallel to US-2 connecting at least as far as West H Street.

**Map 4-3**

- 63) Extend Lakeview Drive in the mobile home park to the Home Depot parking lot and extend eastern access road to Home Depot south all the way to Breitung Avenue.
- 64) Lock-in driveways (to one per parcel) from Dawns Lake Road east to US-141 intersection on both sides of the road.
- 65) See discussion and options for #6 on Map 4-1. In addition consider: 1) constructing a standard five-lane roadway with a standard signalized intersection by moving US-2 as far north as possible; 2) constructing a roundabout; or 3) constructing an indirect-U on eastbound and westbound US-2 by extending the boulevard to the cemetery entrance on the west side and creating a proper U-turn at the east end; or 4) constructing a bridge for left-turns using a modified cloverleaf while not disturbing thru traffic on US-2. This last option is very expensive and considerably more traffic on US-141 would likely be necessary to justify it. If US-141 were rerouted in Wisconsin, it would not be necessary.
- 66) Consolidate four driveways into two and connected with a frontage road (if existing use can be adequately serviced). Use the existing driveway located 500' west of Baler Road on the east side and the furthest existing driveway on the west side.
- 67) Align intersection at Baler Road / 3<sup>rd</sup> Street and US-2 intersection to eliminate offset.
- 68) Construct a rear service road from Baler Road to Lake Antoine Road to serve properties along US-2.
- 69) Create a T-intersection with US-2 and Pine Street.
- 70) As long as the two parcels remain in one ownership and one use, close driveway located 50' west of Bluff Street. Use Bluff Street and Pine Street for ingress and egress.
- 71) Close continuous opening on northwest corner of Lake Antoine Road and US-2 intersection. Use existing driveway on north side of property connecting to Lake Antoine Road for ingress and egress onto US-2. Also consolidate dual u-shaped drive on property along US-2 to the north into a single drive furthest from the intersection. MDOT should consider purchase as clear vision corner.
- 72) Close continuous opening on the northeast corner of Lake Antoine Road and US-2 intersection. Use alley for ingress and egress onto US-2. Properly define all driveway openings. MDOT should consider purchase as clear vision corner.
- 73) Close continuous opening on the southeast corner of Lake Antoine Road and US-2 intersection. Use alley for ingress and egress onto US-2. Properly define all driveways. MDOT should consider purchase as clear vision corner.



- 74) If site is developed, consider extending Brule Street parallel to US-2.
- 75) Once property is developed, align driveways with existing driveways on the south side of US-2 and delete temporary driveways.
- 76) Lock-in driveways to one per parcel (on especially the north side of the road) from east of Lake Avenue to Norway city limits and require future splits to share a common driveway. Where feasible, use rear service roads to access property when these lands develop.
- 77) Align new Breitung Township park driveway with existing drive on the south side of US-2.
- 78) Consolidate two driveways into one, using the western-most driveway to align with road to the south.
- 79) Close western-most driveway so there is only one.

**Map 4-4**

- 80) Consolidate two driveways into one on each of these u-shaped drives. Use eastern-most driveway for ingress and egress onto US-2 for the property on the south side and the western-most driveway for the property on the north side. Be sure drives align when done.
- 81) Consolidate from three driveways to one driveway, those driveways 600' and 700' east of Upper Pine Creek Road and use existing frontage road for access to US-2.
- 82) Lock-in driveways to one per parcel on both sides of US-2 from Murray Road east to City of Norway.
- 83) Close openings on the southeast corner of C Street and US-2 intersection. Properly design driveway access onto US-2 using the eastern most drive.
- 84) Align driveway (or future street) on south side of US-2 with Belgium Town Road to eliminate existing offset.
- 85) Connect existing private road to Belgium Town Road as a public street.
- 86) Consolidate two driveways into one or eliminate both and connect parking lots if similar uses. Use the eastern-most driveway and side street driveway for ingress and egress on the eastern property.
- 87) Realign West 9<sup>th</sup> Street, north of US-2 and create a T-Intersection.
- 88) Consolidate driveways to doctor's office into a single drive.
- 89) Consolidate three driveways into two and narrow their existing width.

- 90) Close continuous opening at the parking lot located southwest of Stephenson Street and US-2 intersection. Construct one driveway for ingress and egress to US-2.
- 91) Allow new access from side street or alley, not from US-2 on almost all properties from Stephenson Street east through City of Norway.
- 92) Better define two points of access into gas station located on the southwest corner of Brown Street and US-2. Also the sign at Citgo blocks left-turning traffic. Keep alley open.
- 93) Add a traffic signal when warrants are met at US-2 and US-8/Brown Street where the intersection is frequently congested from special events.
- 94) Improve line-of-sight at northwest corner of Main Street and US-2. This may require building modifications on the first floor. Improve line of sight on southwest and northeast corners as well.
- 95) Improve line-of-sight at southwest and northwest corners of Iron Street and US-2.
- 96) Close continuous opening located on the northeast corner of Oak Street and US-2 intersection. Use existing driveway connecting to Oak Street for access to US-2.
- 97) Provide buffer strip between parking lot and US-2 to increase sight distance of existing driveway and keep cars out of the right-of-way.
- 98) Close continuous opening located on the northwest corner of Ash Street and US-2 intersection. Use driveway connecting to Railroad Avenue for access to US-2.
- 99) Square up Railroad Avenue at US-2 intersection to reduce sight problems caused by the current acute and obtuse angles.
- 100) Realign Rochon Lane to intersect with E 7th Avenue. Rochon is too close to the railroad tracks.
- 101) Lock-in driveways to one per parcel on north side of US-2 from Curry Road east to Belrose Street in Vulcan, and on the south side of US-2 to Brandt Street.
- 102) Consider right-in-only and right-out-only on 8<sup>th</sup> Avenue at Brandt Street intersection or close 8<sup>th</sup> Avenue at Brandt as it intersects too close to US-2. Also realign north Brandt Street at US-2 to form a better T-intersection.
- 103) Align Summit Drive/Main Street and US-2 intersection to eliminate current offset and reduce slope of Main Street at US-2 (south side).
- 104) Lock-in driveways south of US-2 from Brandt Road to East Main Street in Vulcan.

**Map 4-5**

- 105) Close off the driveway closest to the southwest intersection of US-2 and Main Street on the east side of Vulcan where the bear sculpture is.
- 106) Realign Main Street at US-2 intersection to eliminate acute and obtuse angles.
- 107) Consolidate three driveways into two. Use two outermost driveways for ingress and egress to US-2.
- 108) Consolidate two driveways into one.
- 109) Realign Elm Street to form a T-intersection with US-2.
- 110) Close all three driveways extending off of Maple Street to US-2. Use Cedar Street and Maple Street for access to US-2.
- 111) Lock-in driveways to one per parcel from Cedar Street intersection east to eastern border of Dickinson County on each side of US-2.
- 112) Realign Cherry Street and US-2 to form a T-intersection.
- 113) Close existing driveway onto US-2. Use existing drive on Sturgeon Mill Road for access to US-2.
- 114) Consolidate both driveways to create only one point of ingress and egress.
- 115) Eliminate current offset of driveway north of US-2, to put in alignment with Ball Road.
- 116) Close one leg of u-shaped drive 200' west of Jefferson Street.
- 117) Realign County Road 573 to form a perpendicular intersection with US-2. There is currently poor vision looking both ways on US-2 from County Road 573.

**Map 4-6**

- 118) Realign Swede Settlement Road to form a T-intersection at US-2.
- 119) Relocate driveway to eliminate driveway offset on both sides of US-2.
- 120) Consolidate both driveways to create only one point of ingress and egress.
- 121) Realign Unknown Road and US-2 to form a T-intersection.
- 122) Close driveway on western edge of property. It appears to lead nowhere and does not meet the minimum separation distance

Photo 4-1  
**Highest Crash Intersection: Looking South at US-2/US-141  
at H Street in Iron Mountain**



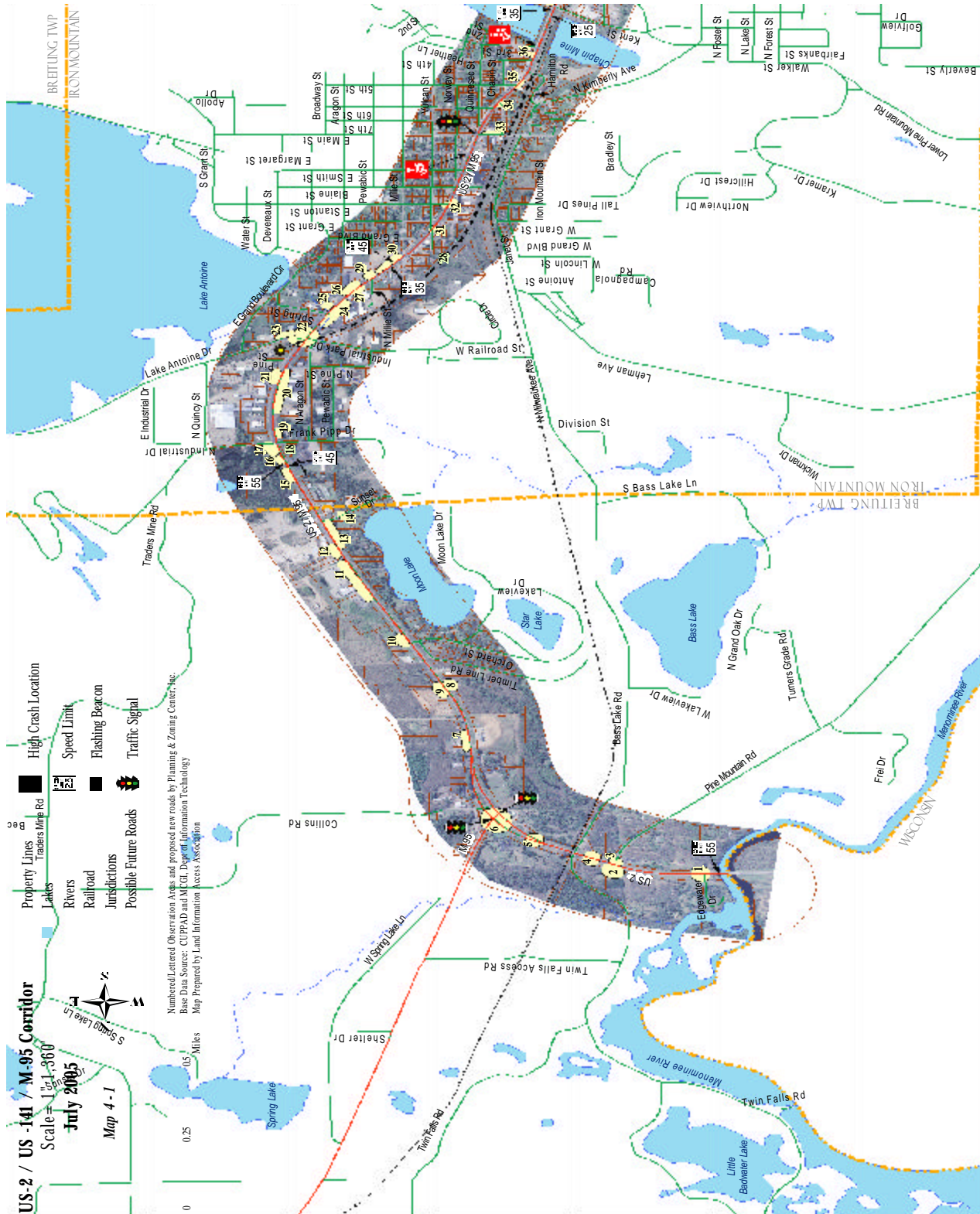
*Photo by Mark Wyckoff, Planning and Zoning Center, Inc., January 2005*

Photo 4-2  
**Highest Crash Intersection: Looking North on H Street at  
US-2/US-141 in Iron Mountain**



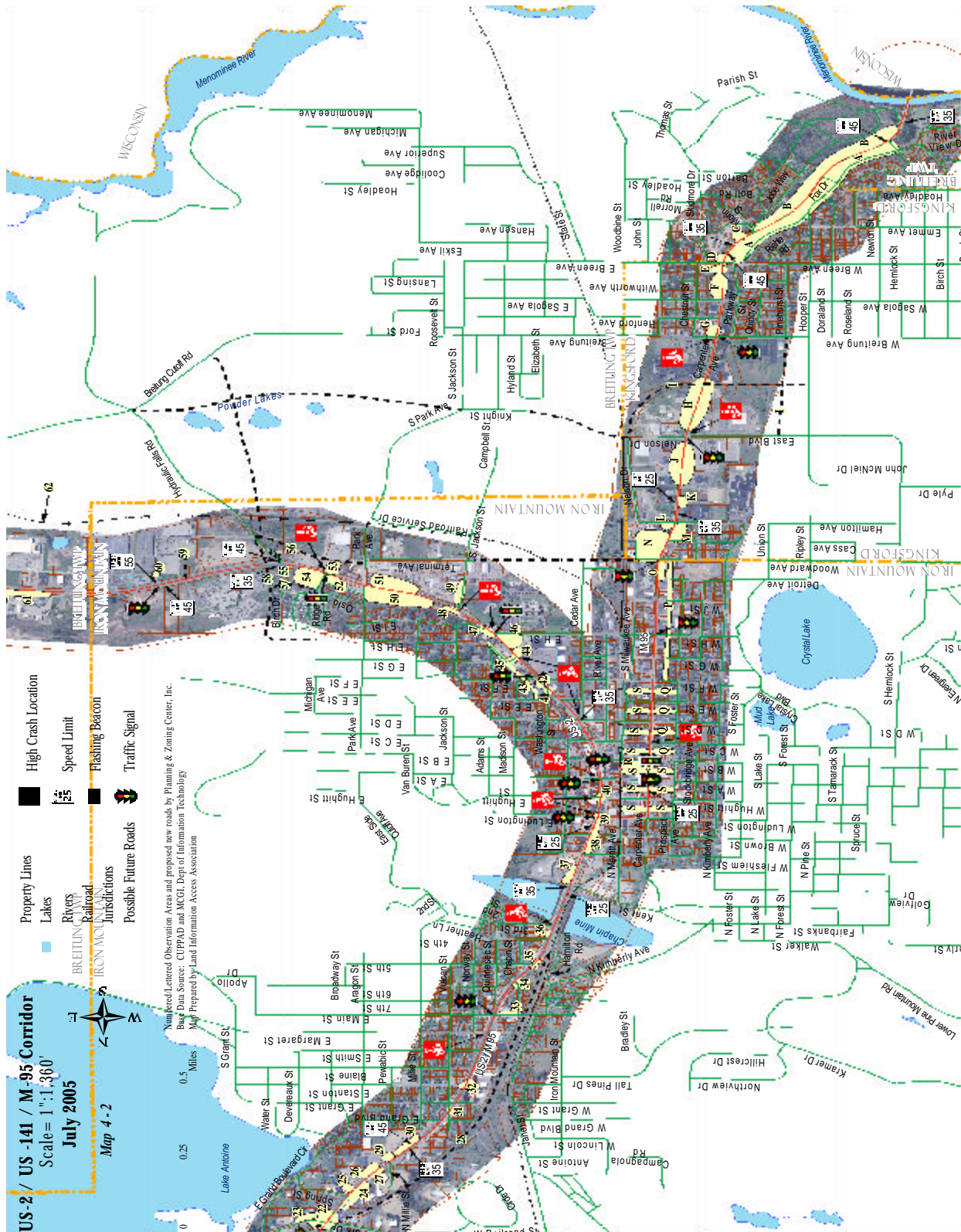
*Photo by Mark Wyckoff, Planning and Zoning Center, Inc., January 2005*

# Map 4-1 North Breitung Township and North Iron Mountain

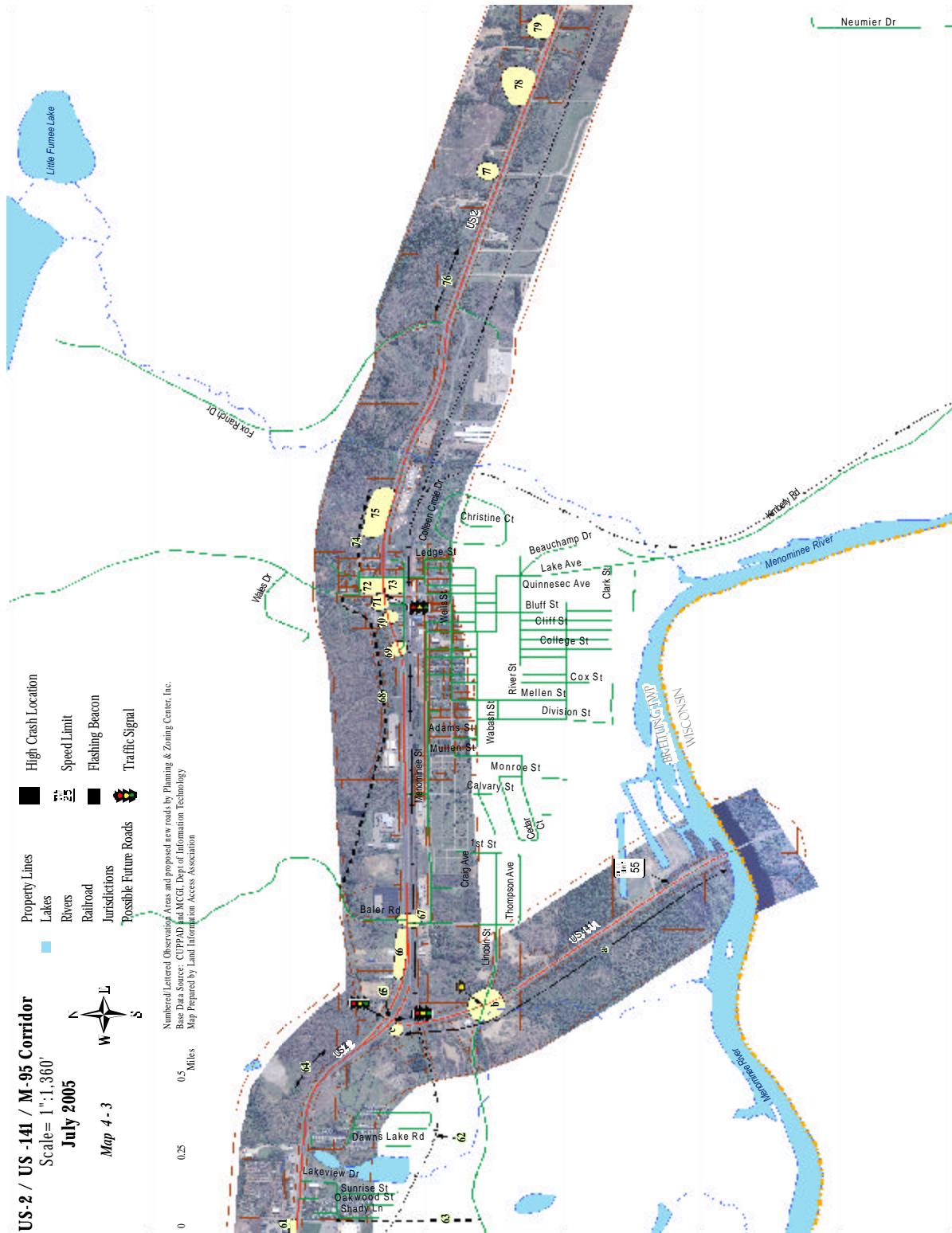




# Map 4-2 Iron Mountain and Kingsford Cities and Southwest Breitung Township

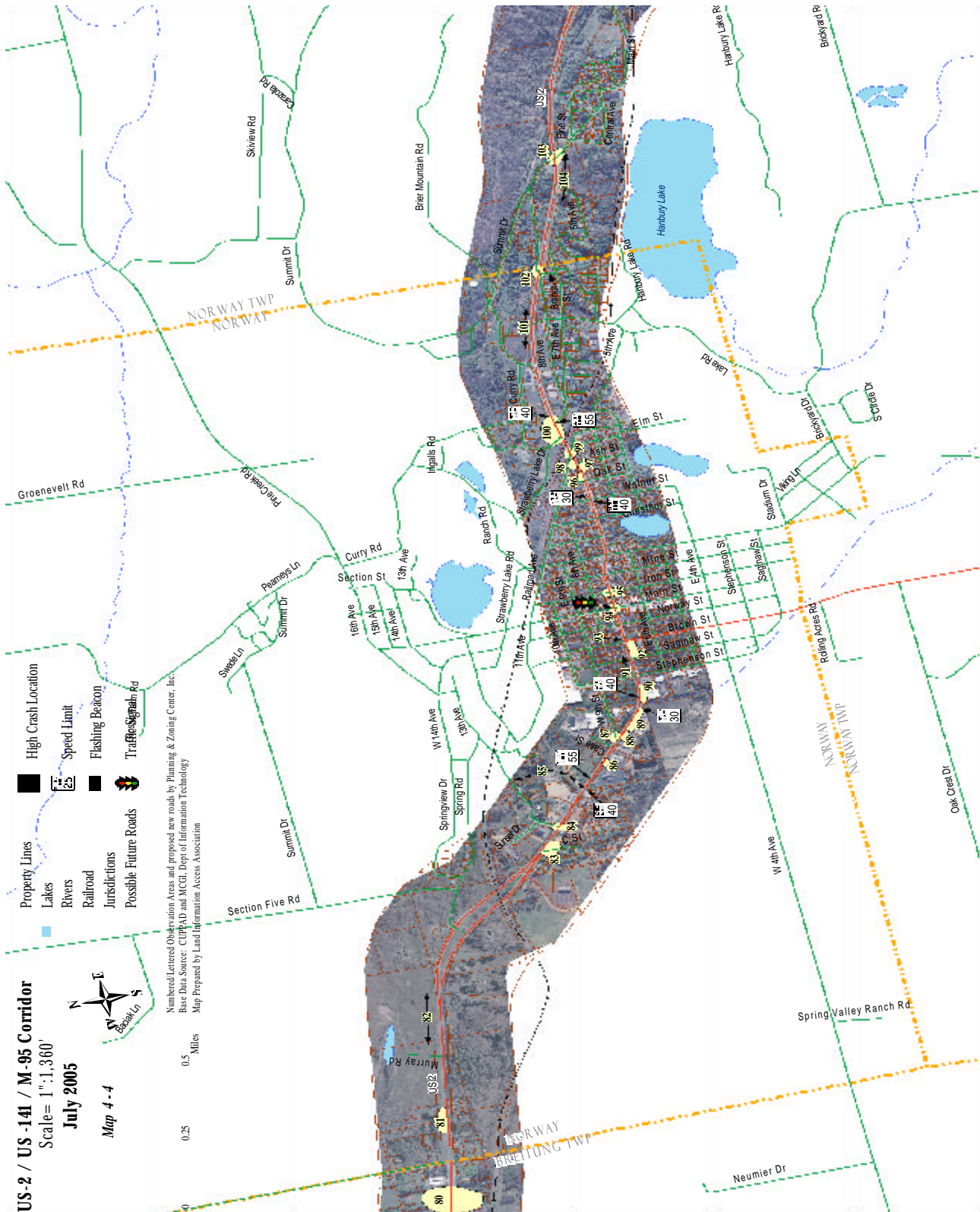


# Map 4-3 Southeast Breitung Township



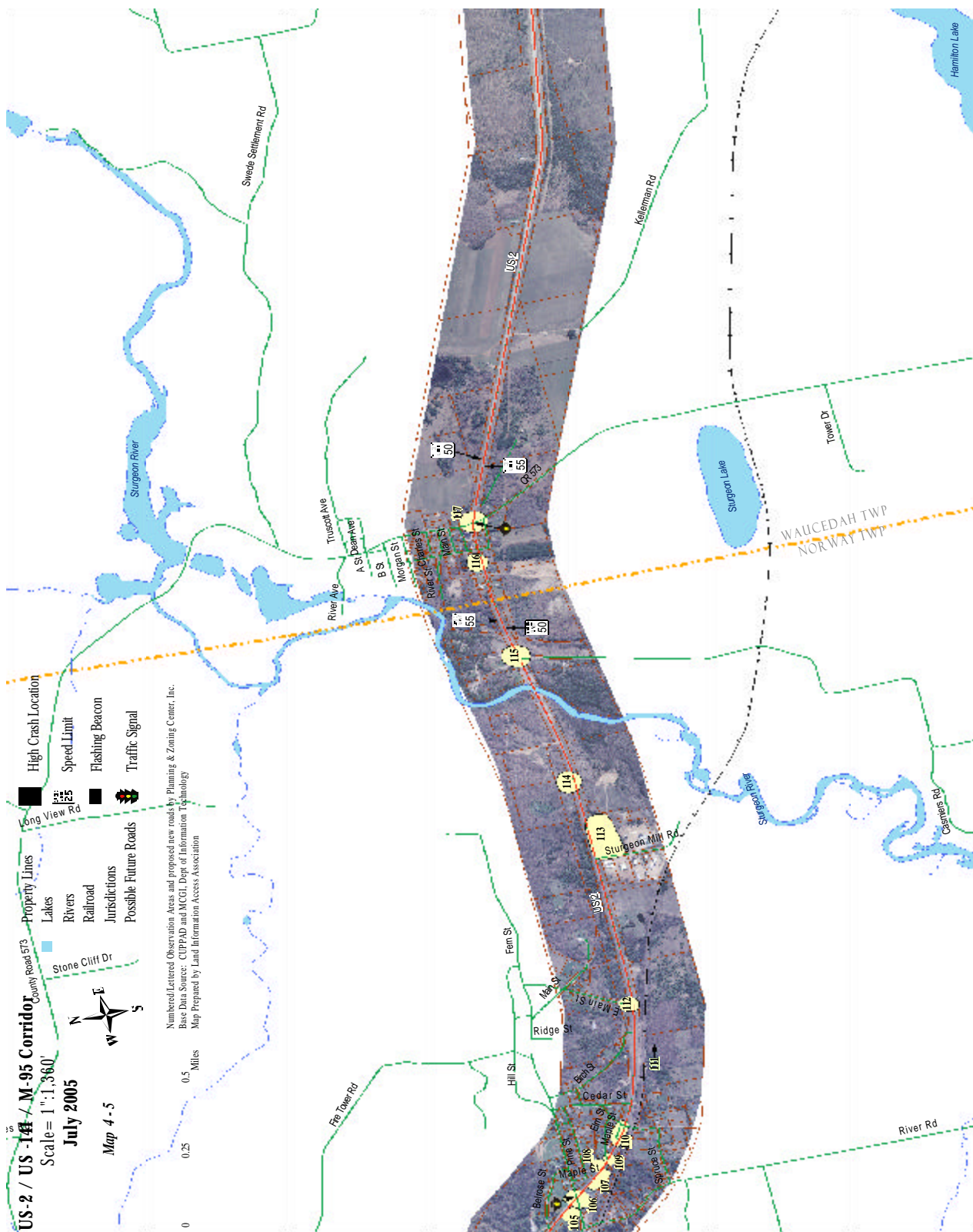


# Map 4-4 Norway City and Southwest Norway Township





# Map 4-5 Southeast Norway and Southwest Waucesha Townships



Map 4-5  
Southeast Norway & southwest Waucesha Twp

# Map 4-6 Southeast Waucedah Township



### **M-95 from Wisconsin/Michigan State Line North through Kingsford to US-2**

There were 20 issues identified along M-95. Many driveway closures are recommended, as well as utilization and preservation of existing alleys for ingress and egress to cut back on the number of access points along M-95. See Map 4-2 for these locations.

#### **Map 4-2**

- A) Breitung Township and the City of Kingsford should prevent future driveway access from Wisconsin border to West Breen Avenue, on the north side of Carpenter Avenue. Use access from Fox Drive.
- B) Preserve existing access to Carpenter Avenue on the east side between the Wisconsin border to Morin Street.
- C) Close one drive on u-shaped driveway accessing M-95.
- D) Close driveways on southeast corner of East Breen Avenue and M-95 intersection. Both are located within 50' of the intersection and do not meet minimum separation distance standards. Use access from Skidmore Drive.
- E) Consider closing drive at northeast corner of East Breen Avenue and Carpenter Avenue.
- F) Close continuous opening at southeast corner of East Sagola Avenue and M-95 intersection. Construct shared driveway for ingress and egress on M-95.
- G) Require shared access and parking lot cross-access at four lots on southeast corner of Breitung Avenue and Carpenter Avenue. When future land is developed require a frontage road for shared access to Carpenter Avenue.
- H) In between West Breitung Avenue and East Boulevard on the east and west side of Carpenter Avenue, there is a lot of undeveloped land. In future site plan reviews, to ensure safety, prohibit additional drives to Carpenter Avenue if possible. Use West Breitung Avenue and East Boulevard for access or access off of current business access. A frontage road may be desirable depending on the uses being served.
- I) Use old rail line ROW for new connecting streets and extend Pinehurst Street to East Boulevard.
- J) Consolidate both parking lot entrances off of M-95. Use northern-most entrance and create a shared driveway with adjoining property to the south. In future site plan reviews, to ensure safety, prohibit additional drives onto M-95. Encourage a frontage road or rear service road for access.
- K) Close driveway accessing M-95 and create a shared driveway with adjoining property to the south.
- L) Close driveway on northeast side of Hamilton Avenue and Carpenter Avenue intersection. Use existing Hamilton Avenue driveway for ingress and egress.
- M) Create right-in only and a right-out only from the west side of Carpenter Avenue in the block from Hamilton Avenue to Cass Avenue....or eliminate direct access to

Carpenter Avenue and use Hamilton Avenue and Cass Avenue for ingress and egress.

- N) Put proper driveways in and if possible use Milwaukee Street for access.
- O) Narrow curb openings and share access from Woodward Avenue to Detroit Avenue on the west side of Carpenter Avenue.
- P) Preserve and restore existing alleys from West F Street to Woodward Avenue. Use these alleys as much as possible for ingress and egress.
- Q) Use alley, West D Street, and West C Street for access to existing buildings along Carpenter Avenue and preserve intersecting alleys from West F Street to West B Street.
- R) Limit access by installing curbing to define driveway at vacant lot on the east corner of West B Street and Carpenter Avenue.
- S) Preserve intersecting alleys on both sides of Carpenter Avenue, from West Ludington Street to West F Street, in order to preserve access to adjacent buildings and prohibit additional access to Carpenter or intersecting streets.

Photo 4-3  
**M-95 Southbound in Kingsford**  
**Parking Lot Snow is Properly Setback from the Highway**



*Photo by Mark Wyckoff, Planning and Zoning Center, Inc., January 2005*

### **US-141 from Wisconsin/Michigan State Line North to US-2**

There were three issues identified along US-141. Realigning an existing intersection to eliminate obtuse angles, increase line-of-sight and limiting future access by allowing only one driveway per parcel. See Map 4-3 for the location of these issues.

#### ***Map 4-3***

- a) Lock-in driveways to one on each parcel from river at US-141 to US-2 so that future splits must use a single common access.
- b) Realign East Breitung Avenue and US-141 intersection to create a perpendicular intersection if feasible, and consider adding a center turn lane at the intersection.
- c) Consolidate two driveways into one. Use existing driveway located 300' from US-2 and US-141 intersection.

Photo 4-4  
**US-141 at Breitung Avenue Looking South**



*Photo by Mark Wyckoff, Planning and Zoning Center, Inc., January 2005*



Photo 4-5

**US-141 at Breitung Avenue Looking North from East Side of Breitung Avenue**



*Photo by Mark Wyckoff, Planning and Zoning Center, Inc., January 2005*

**PROPOSED BUS, BICYCLE, PEDESTRIAN, TRANSIT AND SNOWMOBILE IMPROVEMENTS**

**Pedestrian Systems**

Pedestrians are not well served along most of the corridor, even in the cities. Creating more pedestrian facilities along US-2/US-141/M-95 is needed; however, new pedestrian facilities must be designed so that the safety of the pedestrians is foremost. Presently, there are not many sidewalks along the corridor. And where sidewalks are available, they are often too close to the road. See Photo 4-6. There are “raised curbs” adjacent to the road in various locations along the corridor that pedestrians reportedly utilize as a sidewalk when they are not being used for snow storage. There are also many parking lots close to the road, but these are not proper sidewalks. There should be sidewalks on both sides of the road in urbanized parts of the corridor. Pedestrian crossings should be clearly marked at major intersections and crossing signals should be provided at every signalized intersection. Pedestrians should be clearly guided to the safest crossing locations. See Photo 4-7.

Pedestrian overpasses, or tunnels are options that protect the pedestrian from having to cross the highway at grade. See Photo 4-8. These are preferred alternatives where traffic speed is high, and/or traffic flow or mix issues make it difficult to safely site a crosswalk at grade; however, they are expensive. Sidewalk connections are also needed for any new overpasses or tunnels across US-2/US-141/M-95.

Photo 4-6  
**Sidewalk too Close to Street**



*Photo by Thyra Karlstrom, CUPPAD, 2004*

Photo 4-7  
**Raised Curbs Instead of Sidewalks**



*Photo by Thyra Karlstrom, CUPPAD, 2004*

Photo 4-8  
**Pedestrian Tunnel While Under Construction in Houghton in 2003**



Source: MDOT, Ishpeming TSC

### ***Breitung Township, City's of Iron Mountain, Kingsford, and Norway***

Iron Mountain, Kingsford, Norway, and Breitung Township should have the most extensive pedestrian systems and investment in them along the corridor, because they have the majority of the population and the land uses with the most desired pedestrian destinations along the corridor. While historically there has been a significant lack of accommodation for pedestrians along US-2/US-141/M-95, in both Iron Mountain and Norway there has been a recent effort to implement traffic calming on adjoining streets and more pedestrian orientation in local planning and street design.

In downtown Iron Mountain, Kingsford, and Norway there are pedestrian cross walks at a few major intersections. It is recommended that these cross walks receive new paint striping and where appropriate at unsignalized intersections, add signs warning drivers of pedestrians crossing the streets. Each city and Breitung Township should also consider a plan that links pedestrian, bike, and transit accessibility improvements for the US-2/US-141/M-95 corridor. Landscaping should also be incorporated into any new sidewalk designs.

### ***Waucedah and Norway Townships***

Predominately rural, Waucedah and Norway Townships have no pedestrian crosswalks due to the low population density and limited development. However, where pedestrian crossings take place (as in Vulcan and Loretto) there should be warning signs and clear pavement markings.

### **Recreation Trails**

There are proposed multi-use pathways and walking/bike trails in Iron Mountain and Norway that cross and/or parallel US-2/US-141/M-95. Map 4-7 shows the network of proposed recreational trails along the corridor. Photo 4-9 shows at least some bicyclists are on streets even when the temperature is zero degrees.



Photo 4-9  
**Bicyclist Braves Zero Degrees in Iron Mountain**



*Photo by Mark Wyckoff, Planning and Zoning Center, Inc., January 2005*

The main proposed multi-use trail in Iron Mountain begins at the southern end of the city along M-95 continuing north along US-2 through the northern city limits of Iron Mountain. There are two other proposed multi-use trails in Iron Mountain that intersect with the US-2/US-141/M-95 corridor. During construction of these multi-use trails, pedestrian tunnels should be seriously considered, for this is by far the safest type of pedestrian crossing.

The main walking/bike trail proposed around Norway closely follows along the US-2/US-141/M-95 corridor and crosses over at several locations. Again, underground pedestrian crossings should be considered when constructing these trails for maximum safety to both users and motorists.

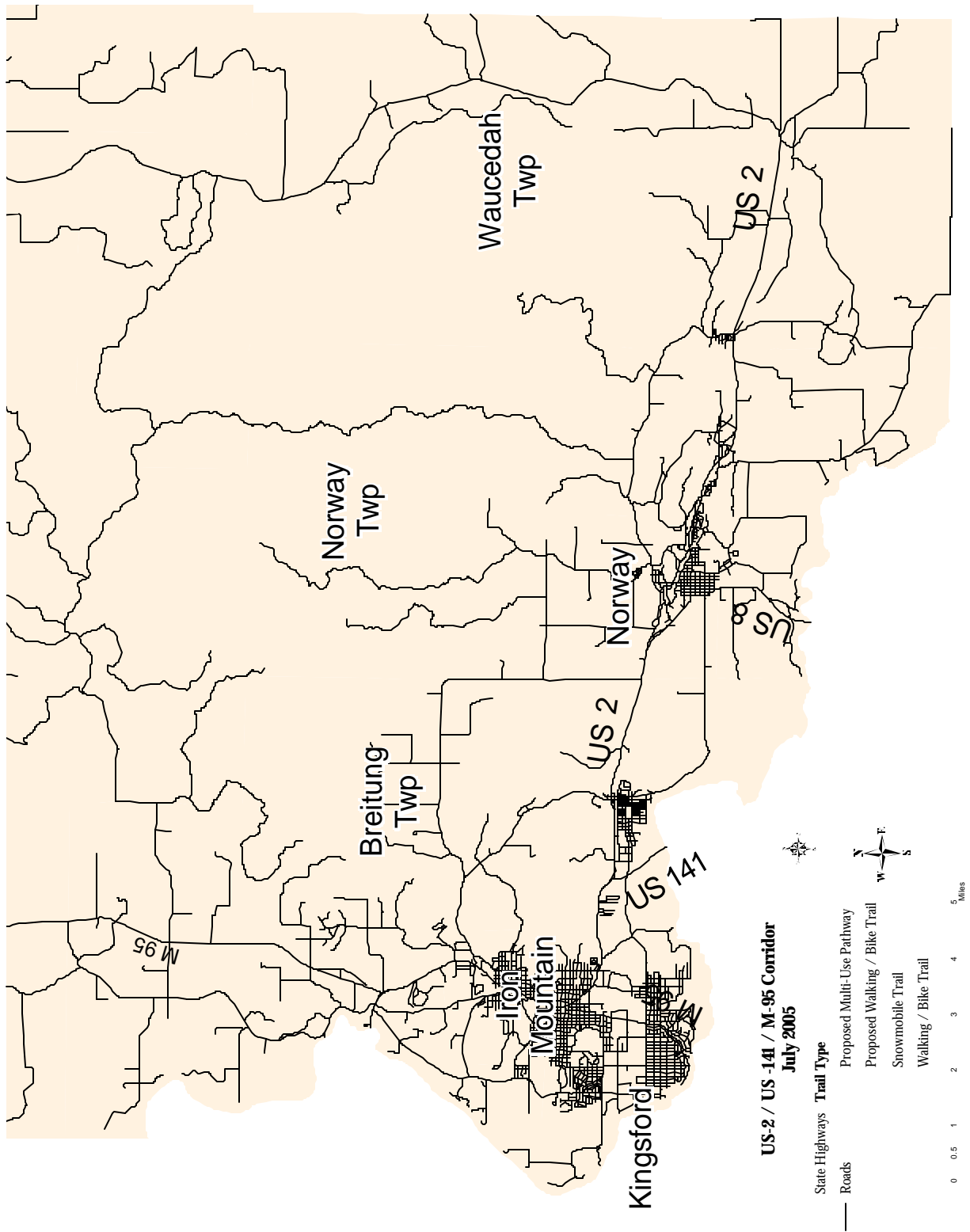
### ***Snowmobile Trails***

Dickinson county snowmobile trails connect to the rest of the Upper Peninsula and northern Wisconsin. According to the Recreational Trails Map (see Map 4-7) there are four snowmobile crossings along the corridor. Snowmobiles are used in the winter for recreational trips as well as for short trips within the outlying areas.

From west to east, the first snowmobile crossing is near Lake Antoine Road in Iron Mountain. This portion of the corridor is five lanes and has a blinking traffic signal. A rubber surface has been applied across the highway to protect the asphalt at this crossing. The second crossing is on the western side of the City of Norway. This portion of the corridor is four lanes and does not have a traffic signal. Coupled with the high traffic volumes in each area, these are potentially difficult areas for snowmobilers to safely cross the highway. The third snowmobile crossing is located on the eastern edge of Norway Township, just east of the Sturgeon River Bridge. This two-lane crossing, also with a rubber surface, is along a 55-MPH zone. The final snowmobile crossing is located in the central part of Waucedah Township. This trail passes under the corridor via a culvert.

Snowmobile groups are encouraged to meet with MDOT and local government officials to identify the best solutions to these and related issues along the corridor.

Map 4-7  
Recreational Trails Map



Source: Map prepared by Land Information Access Association, 2005

## Transit

Dickinson County currently has no form of local transit however, Iron Mountain is serviced by Greyhound every Monday through Saturday. Greyhound stops at US-2 and Margaret Street and travels either northbound to Calumet, eastbound to Mackinaw City, southbound to Green Bay, Wisconsin, or westbound to Duluth, Minnesota.

If a local transit system were to be established, the route must be carefully planned and flow with current traffic. Bus pull-out lanes would need to be constructed as well as sidewalks to promote ease of dropping off and picking up passengers at the curb which is more cost effective than dropping off passengers in a parking lot. Speed limits would also have to be studied to determine safe locations for bus pull-out lanes.

A local transit system would allow Dickinson County and especially the City of Iron Mountain to cater to both residents and tourists. Tourists that come into the county for recreation events would be able to navigate by visible information on services, such as a downtown kiosk. Bus shelters and signs would also assist those new to the system. Bus stop signs with schedules for the route and maps of where it goes are particularly helpful. Adding bike racks on buses would also provide an opportunity to capture riders who may wish to continue a trip on a bicycle.

## Display of Goods and Signs in Right-of-Way

Many business establishments along the corridor display signs, goods, products or vehicles for sale inside the right-of-way of US-2/US-141/M-95. This is an infringement on the public right-of-way and often impedes clear vision at driveways and intersections. Local zoning officials and law enforcement officials should work with MDOT to prohibit such infringement of the right-of-way and then routinely enforce all applicable laws (e.g., Michigan Vehicle Code 257.676). See Photo 4-10 for an example.

Photo 4-10  
Display of Sign in Right-of-Way



Photo by Thyra Karlstrom, CUPPAD, 2004

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